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## Addressing scientific integrity scientifically

Mayer, Tony; Bouter, Lex; Steneck, Nick

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## LETTERS

Edited by Jennifer Sills



The recently discovered saola (*Pseudoryx nghetinhensis*) is at risk of extinction.

## Editorial expression of concern

In the 15 September issue, *Science* published the Report “Biological fabrication of cellulose fibers with tailored properties” by F. Natalio *et al.* (1). After the issue went to press, we became aware of errors in the labeling and/or identification of the pigments used for the control experiments detailed in figs. S1 and S2 of the supplementary materials. *Science* is publishing this Editorial Expression of Concern to alert our readers to this information as we await full explanation and clarification from the authors.

**Jeremy Berg**  
Editor-in-Chief

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## Saving the saola from extinction

The saola (*Pseudoryx nghetinhensis*)—a primitive wild cattle species (1) endemic to the Annamite mountain range of

Vietnam and Lao People’s Democratic Republic (PDR)—was first discovered in 1992 (2, 3). Twenty-five years later, it is on the verge of extinction (4). Although precise population estimates are not possible, the Saola Working Group, part of the Asian Wild Cattle Specialist Group of the IUCN Species Survival Commission, estimated in 2015 that fewer than 100 saola survive (5).

The primary threat to saola is intensive, commercial snaring (6) to supply the thriving wildlife trade in Indochina (7). Because snares kill indiscriminately, nontarget species such as saola are affected along with target species. Other threatened endemic species in the region, including the recently discovered large-antlered muntjac (*Muntiacus vuquangensis*) and Annamite striped rabbit (*Nesolagus timminsi*), also suffer from snares (8, 9).

There has been little progress in either Vietnam or Lao PDR to sufficiently reduce snaring, and even if poaching could be stopped, saola numbers are now too low and fragmented to allow the species to recover. To save saola from extinction, we must rescue surviving individuals and provide a protected habitat for them. The last saola must be found, caught and transferred to captive breeding facilities located

within the range countries. The first facility is currently being built in Vietnam (10). The breeding center will be staffed with hoofstock experts to ensure the survival and successful breeding of captured saola. After a captive population has been secured, the next challenge will be to protect one or more areas from poaching—only then can the species be reintroduced into the wild. Other threatened Annamite endemics will benefit from these protection efforts. Creating a place for saola to flourish will require a substantial, well-funded, collaborative international effort, in partnership with the governments of Vietnam and Lao PDR.

**Andrew Tilker,<sup>1,2\*</sup> Barney Long,<sup>2</sup> Thomas N.E. Gray,<sup>3</sup> William Robichaud,<sup>4</sup> Thanh Van Ngoc,<sup>5</sup> Nguyen Vu Linh,<sup>6</sup> Jeff Holland,<sup>7</sup> Stephen Shurter,<sup>8</sup> Pierre Comizzoli,<sup>9</sup> Patrick Thomas,<sup>10</sup> Radoslaw Ratajszczak,<sup>11</sup> James Burton<sup>12</sup>**

<sup>1</sup>Leibniz Institute for Zoo and Wildlife Research, Berlin 10315, Germany. <sup>2</sup>Global Wildlife Conservation, Austin, TX 78767, USA. <sup>3</sup>Wildlife Alliance, Phnom Penh, Cambodia. <sup>4</sup>Saola Working Group c/o Global Wildlife Conservation, Austin, TX 78767, USA. <sup>5</sup>World Wildlife Fund–Vietnam, Hanoi, Vietnam. <sup>6</sup>Nature Department, Vietnam Forestry Administration, Hanoi, Vietnam. <sup>7</sup>Center for the Conservation of Tropical Ungulates, Punta Gorda, FL 33982, USA. <sup>8</sup>White Oak Conservation, Yulee, FL 32097, USA. <sup>9</sup>Smithsonian Conservation Biology Institute, National Zoological Park, Washington, DC 20008, USA. <sup>10</sup>Wildlife Conservation Society, Bronx Zoo, New York, NY 10460, USA. <sup>11</sup>Zoo Wrocław, Wrocław, Poland. <sup>12</sup>IUCN SSC Asian Wild Cattle Specialist Group, Austin, TX 78767, USA.

\*Corresponding author. Email: tilker@izw-berlin.de

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## Addressing scientific integrity scientifically

In their Editorial “Step up for quality research” (11 August, p. 531), N. J. Schrag and G. M. Purdy rightly recommend greater involvement from universities to ensure that their own research communities produce high-quality, reproducible

research data. However, universities must do more than “ask [themselves] tough questions” such as “[w]hat incentives may influence or impede research integrity and reduce research quality and reproducibility of results?” Universities must encourage their scholars to address these questions rigorously and scientifically and take time to review what others have done.

To introduce greater rigor into the study of research integrity and the factors that foster or discourage responsible behavior, the participants at the Fifth World Conference on Research Integrity endorsed the “Amsterdam Agenda” (1). Under this Agenda, the newly created World Conferences on Research Integrity Foundation plans to establish a registry for research on research integrity. The registry will ask researchers to describe the integrity problem they are addressing, how the problem affects research, the intervention they are introducing to address the problem, why they hypothesize that the intervention will work, how they will assess the outcome, and their plans for data sharing.

The premise behind this effort is that universities should practice what they preach by supporting the development and adoption of evidence-based policies aimed at improving integrity in research. Such an effort will require support from funders, publishers, and professional organizations, but we agree with Schrag and Purdy that universities must take the lead.

**Tony Mayer,<sup>1,4\*</sup> Lex Bouter,<sup>2,4</sup>**

**Nick Steneck<sup>3,4</sup>**

<sup>1</sup>Nanyang Technological University, Singapore 639798, Singapore. <sup>2</sup>Vrije Universiteit, 1081 HV Amsterdam, , Netherlands. <sup>3</sup>University of Michigan, Ann Arbor, MI 48109, USA. <sup>4</sup>Co-Chair, Fifth World Conference on Research Integrity.

\*Corresponding author.

Email: [tonymayer@ntu.edu.sg](mailto:tonymayer@ntu.edu.sg)

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## North Korea ban blocks humanitarians

In his *ScienceInsider* news story “North Korea travel ban would hit Pyongyang University hard” (21 July; <http://scim.ag/koreaban>), R. Stone discusses the impacts that the ban on U.S. travel to North Korea would have on Pyongyang University. In the 25 August Letter “Korean physicians’ bond defies borders” (p. 764), K.

B. Park adds that the ban would disrupt collaboration between U.S. and Korean physicians. The ban would represent a major setback to humanitarian programs in North Korea as well.

The ban would, at best, substantially aggravate the suffering of the most vulnerable and, at worst, lead to senseless deaths. As an example, DoDaum is a U.S.-based organization working to improve public health in North Korea. We have worked for years to develop trust and rapport with agencies in the isolated nation to gain access to rural civilians suffering from communicable diseases. In the coming weeks, we were to begin directly observing treatment procedures for HIV/AIDS patients with a team of U.S. health professionals. The ban, at least in the short term, has thwarted such efforts and will prevent the treatment of many Koreans (1).

Humanitarian work in North Korea is already fraught with logistical and administrative obstacles. Reliably and efficiently communicating with agencies inside North Korea is difficult. American personnel must be cleared by the North Korean government to diagnose and treat civilians. Recent political developments will therefore severely limit the already strained humanitarian channels between the two countries.

If there is a silver lining to the ban, and one must look very hard to find one, it is that it may encourage innovative initiatives that do not require on-the-ground personnel. Recently, Pyongyang University of Sciences and Technology has partnered with DoDaum to develop and deploy an online medical education program, which supplies medical trainees with online educational resources. This type of work is only a salve, not a solution, but a ban in the near term may make it the only viable option.

**Tae-hoon Kim**

DoDaum, New York, NY, 11356, USA.

Email: [admin@dodaum.com](mailto:admin@dodaum.com)

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#### ERRATA

Erratum for the Report “A nontoxic pain killer designed by modeling of pathological receptor conformations” by V. Spahn *et al.*, *Science* **356**, eaao0278 (2017). Published online 9 June 2017; 10.1126/science.aao0278

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